Amendments to the Claims

1. (Currently Amended) A method of [~~modulating~~] promoting hematopoietic stem cell differentiation, comprising:

contacting [~~said~~] hematopoietic stem cells *in vitro* with one or more antisense morpholino oligomers[,] having a substantially uncharged backbone and a base sequence directed to a target sequence spanning the translational start codon or an intron or exon junction site of an mRNA [~~preferentially expressed in stem cells~~] transcribed from a human EVI-1 zinc finger gene,

wherein said contacting is effective to achieve (i) an increase in the number of lineage committed progenitor cells and their progeny, and/or (ii) a slowing or diminution of the growth of cells exhibiting a loss of growth control, or a reduction in the total number of such cells.

2. (Cancelled)

3. (Previously amended) The method of claim 1, wherein each of said one or more antisense oligomers has a length of about 12 to 25 bases.

4. (Previously amended) The method of claim 1, wherein each of said one or more antisense oligomers is characterized by

(a) a backbone which is substantially uncharged;

(b) the ability to hybridize with the complementary sequence of a target RNA with high affinity at a Tm greater than 50°C;

(c) nuclease resistance; and

(d) the capability for active or facilitated transport into cells.

5. (Previously amended) The method of claim 1, wherein said antisense morpholino oligomer comprises phosphorodiamidate intersubunit linkages, joining a morpholino nitrogen of one morpholino subunit to a 5'-exocyclic carbon of an adjacent morpholino subunit.

6. (Currently Amended) The method according to claim [~~2~~] 1, wherein each of said one or more

antisense oligomers has [~~a sequence selected from the group consisting of~~] the sequence presented as SEQ ID NO:1[~~, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:10, SEQ ID NO:11 and SEQ ID NO:12~~].

7-9. (Cancelled)

10. (Currently Amended) [~~A method of modulating hematopoietic stem cell differentiation, comprising:~~] The method of claim 1, wherein said hematopoietic stem cells are provided by:

(a) obtaining a stem cell-containing cell population from a subject; and

(b) treating the cell population in manner effective to enrich the cell population for stem cells[~~; and~~

~~(c) exposing the enriched stem cell population *ex vivo* to one or more antisense morpholino oligomers, having a substantially uncharged backbone and a base sequence directed to a target sequence spanning the translational start codon or an intron or exon junction site of an mRNA preferentially expressed in stem cells,~~

~~under conditions effective to (i) to increase the population of lineage committed progenitor cells and their progeny in the peripheral circulation of the subject, and/or (ii) effect a slowing or diminution of the growth of cells exhibiting a loss of growth control, or a reduction in the total number of such cells; and~~

~~(d) infusing the antisense oligomer-treated cell population into said subject~~].

21. (New) The method of claim 10, further comprising the step of infusing the antisense oligomer-treated cell population into said subject.

11-16. (Cancelled)

17. (Currently Amended) A composition comprising an antisense morpholino oligomer characterized by a backbone which is substantially uncharged, where said oligomer is directed to a sequence spanning the mRNA translational start codon of a human EVI-1 zinc finger gene [~~preferentially expressed in stem cells~~].

22. (New) The composition of claim 17, wherein said oligomer has the base sequence presented as SEQ ID NO:1.

18. (Cancelled)

19. (Currently Amended) A composition comprising an antisense oligomer having an [~~substantially~~] uncharged backbone, wherein said antisense oligomer is characterized by

(a) the ability to hybridize with the complementary sequence of a target RNA with high affinity at a Tm greater than 50°C,

(b) nuclease resistance, and

(c) the capability for active or facilitated transport into cells;

and has the sequence presented as SEQ ID NO:1.

20. (Cancelled)